



Philips OneSpace luminous ceiling

Panel installation manual

PHILIPS

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1. Welcome to the world of Philips OneSpace luminous ceiling

OneSpace luminous ceiling is the latest innovation of Philips Large Luminous Surfaces. OneSpace luminous ceiling is a functional white light solution capable of transforming the ceiling of any office, retail or hospitality environment into a clutter-free ceiling.

"The ceiling becomes the light, the light becomes the ceiling."

Key features:

- Large illuminated surface, customizable to fit any area
- High quality homogeneous light distribution
- Glass fiber front and acoustic properties
- Highest fire safety class A2, s1-d0

Depending on the configuration, the system can consist of several parts:

- A luminous ceiling panel, which is the part that is mounted to the ceiling and generates the light
- A group of E-cabinets or E-boxes, which contain the drivers and the electronic control components
- A hoisting system, which is used to hoist the panel into final position, and to lower the panel for maintenance purposes. The hoisting system can be a permanent hoisting system or a temporary one

For the total luminous ceiling panel system, an installation-, user- and/or service manual is available for the following parts:

- Luminous ceiling panel
- E-cabinet or E-box
- Hoisting system (installation manual only in case of a permanent hoisting system)

About this installation manual.

This manual contains all the necessary steps to install the luminous ceiling panel. Once the installation is complete, a luminous ceiling panel can be connected to the hoisting system, hoisted to its final position, connected to the E-cabinet, and can be lit and controlled safely.

2. Safety instructions and warnings

CAUTION! – READ THIS FIRST --- IMPORTANT SAFETY INSTRUCTIONS

WARNING:

- HOISTING SYSTEMS, E-CABINETS AND LUMINOUS CEILING PANELS MUST BE INSTALLED BY QUALIFIED TECHNICIANS IN ACCORDANCE WITH ALL NATIONAL AND LOCAL LAWS, INCLUDING BUILDING CODES, ELECTRICAL CODES AND SAFETY REGULATIONS.

WARNING:

- DO NOT ATTEMPT TO INSTALL OR USE THE LUMINOUS CEILING PANEL, ITS HOISTING SYSTEM AND E-CABINETS UNTIL YOU HAVE COMPLETELY READ AND UNDERSTOOD THE INSTALLATION INSTRUCTIONS AND SAFETY LABELS.

WARNING:

- THE HOISTING SYSTEM MAY ONLY BE USED BY PERSONNEL WHO HAVE BEEN TRAINED BY PHILIPS LARGE LUMINOUS CEILING STAFF.

WARNING:

- THE HOISTING SYSTEM MAY ONLY BE USED TO HOIST A LUMINOUS CEILING PANEL.

WARNING:

- CHECK MAIN SWITCH ON E-CABINET TO ENSURE THAT THE MAIN POWER SUPPLY IS OFF OR DISCONNECTED FROM THE E-CABINET BEFORE INSTALLING OR WIRING A LUMINOUS CEILING PANEL OR E-CABINET.

WARNING:

- NOBODY IS TO BE UNDERNEATH A LUMINOUS CEILING PANEL WHEN THE PANEL IS BEING LOWERED OR LIFTED.

WARNING:

- NOBODY IS TO BE UNDERNEATH A LUMINOUS CEILING PANEL WHEN THE PANEL IS NOT HORIZONTAL.

WARNING:

- NOBODY IS TO BE UNDERNEATH A LUMINOUS CEILING PANEL WHEN THE PANEL IS NOT SECURED WITH SAFETY SLINGS.

Caution:

- Luminous ceiling panel connection cables have plugs that fit only in one orientation. Do not try to force the plugs in to any other orientation, as this may lead to product damage.

Caution:

- Luminous ceiling panels do not have user-serviceable parts. Do not attempt to open them or you will void the warranty.

Caution:

- Ensure that no high-velocity air-flow (e.g. air conditioning system air-currents) circulates across the luminous ceiling panel. This may lead to increased wear, and accumulation of dirt, on the textile.

Caution:

- Avoid installing sources of mechanical vibrations onto structures that are rigidly connected to the luminous ceiling panel.

3. Installation



WARNING!

SAFETY REGULATIONS MENTIONED IN THIS DOCUMENT MUST BE COMPLIED WITH. FAILURE TO COMPLY MAY RESULT IN PRODUCT DAMAGE OR PERSONAL INJURY.



Items marked with the warning triangle should be executed as instructed, and double-checked because they are safety critical.

3.1 Installation sequence

Overview of the complete luminous ceiling panel installation sequence:

Preparation:

1. Study any installation drawings and determine the luminous ceiling panel installation locations and distances to reference markers defined for the building.
2. Perform an on-site survey and check that:
 - a. The substructure with all hoisting points has been installed at their designated locations, as given in the installation drawings.
 - b. Junction boxes and field cabling have been installed in the ceiling plenum at the locations indicated by the installation drawings.
 - c. E-cabinets have been installed and connected to the field cabling. Also ensure that mains supply is available.
 - d. The floor space is clean, dust free, flat and clear of obstructions.

Actual installation sequence:

1. Attach the upper mounting block to the substructure and mount a Reutlinger connector in each block (paragraph 3.3).
2. Cut steel cable to the required length and put one end of the cable in each of the Reutlinger connectors (paragraph 3.4).
3. Connect the luminous ceiling panel power cables to the junction boxes (paragraph 3.5).
4. Unpack the required luminous ceiling panel modules (paragraph 3.6).
5. Assemble the panel by attaching the modules together (paragraph 3.7).
6. Connect the lower mounting blocks to the panel and mount a Reutlinger connector in each block (paragraph 3.8).
7. Connect the temporary hoisting blocks to the panel (paragraph 3.9).
8. Connect the hoisting winches to the hoisting points and the hoisting cable to the temporary hoisting blocks (paragraph 3.10).
9. Hoist the panel and rotate to a 60 degree position (paragraph 3.11).
10. Connect the luminous ceiling panel power using extension cables (paragraph 3.12).
11. Test lighting up of the panel (paragraph 3.13).
12. Hoist the panel up to a sufficient height, and attach the safety sling (paragraph 3.14).
13. Use a white glove to clean the edge of the frame (paragraph 3.15).
14. Roll out fabrics underneath the panel (paragraph 3.16).
15. Lower the panel onto the fabrics (paragraph 3.17).
16. Attach the fabrics to the panel and tension them (paragraph 3.18).
17. Hoist the panel up to test height of two meters (paragraph 3.19).
18. Test fabric quality by switching the luminous ceiling panel on (paragraph 3.20).
19. Attach the luminous ceiling panel side covers (paragraph 3.21).

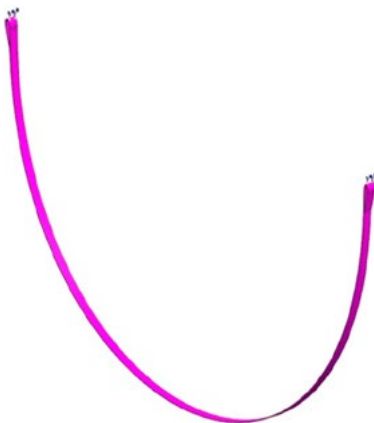
20. Attach fabric protection foil (paragraph 3.22).
21. Hoist the panel up to about 1m below ceiling level (paragraph 3.23).
22. Attach the luminous ceiling panel power cables to each module (paragraph 3.24).
23. Test lighting up of the luminous ceiling panel (paragraph 3.25).
24. Hoist the panel up to the ceiling and connect the steel cables to the lower mounting parts (paragraph 3.26).

3.2 Required tools and materials

- Tape measure with minimum length of 30m
- Marker pen
- Torque wrench M8, with torque set according to instructions below
- Hoisting synchronization tool (12NC: 8122-419-98350)



- Safety sling (12NC: 8122-419-96630)



3.3 Attach the upper mounting block to the substructure

1. Attach the upper mounting blocks to the substructure using M12 bolts and matching nuts for the substructure, see Figure 1. The intended positions are indicated on installation drawings. Using the tape measure and marker pen, indicate the positions of the mounting blocks on the substructure according to the installation drawings.

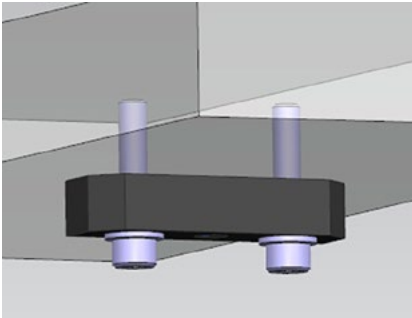


Figure 1: Attach upper mounting block to the substructure.

2. Mount a Reutlinger connector (Figure 2) in each upper mounting block, see Figure 3.



Figure 2: Reutlinger connector.

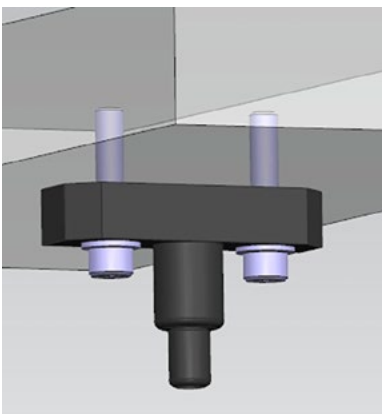


Figure 3: Reutlinger connector in upper mounting block.

3.4 Cut steel cable to the required length and put one end of the cable in each of the Reutlinger connectors

Cut the required length of the steel cable and put one end in each of the Reutlinger connectors, hand tighten the lock, see Figure 4.

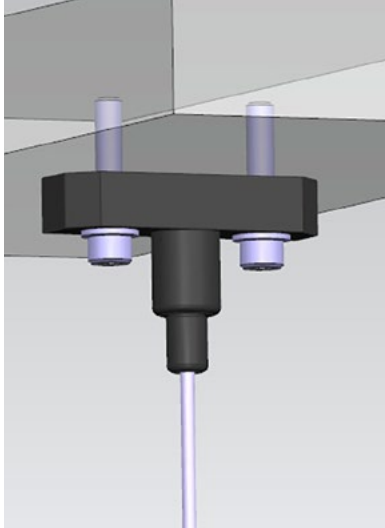


Figure 4: Steel cable in Reutlinger connector.



THE REUTLINGER LOCK MUST BE HAND TIGHTENED.

3.5 Connect the luminous ceiling panel power cables to the junction boxes

Consult the installation drawings to determine correct cable type and quantity of cables for each junction box. Install the luminous ceiling panel power cables according to the instructions in the installation drawings. Connect the luminous ceiling panel power connectors to the sockets of the same color (green to green, grey to grey, pink to pink).

- Test correct connection by attaching the E-cabinet test box to each cable set per junction box and switch on the E-cabinet that powers the junction box. Check correct lighting up of LED driver power indicators.
- Bind cables together for end modules.

3.6 Unpack the required luminous ceiling panel modules

Check all the boxes and/or crates for damage before unpacking the luminous ceiling panel modules. In the event that boxes are damaged, please inform the local project leader.

If a module has been damaged, inform the Philips project manager and have him decide whether the unit has to be repaired on-site or replaced with a new one.

A luminous ceiling panel is made up of (as indicated on the installation sheets):

- 1 piece of Left module
- A number of Center modules
- 1 piece of Right module

Consult the installation drawings for the correct luminous ceiling panel dimensions at the installation location, and for a detailed overview per panel type, including the quantity and dimensions of Center-, Left- and Right modules.

3.7 Assemble the panel by attaching the modules together

Prepare the installation site by ensuring the floor is flat and level, and is free of dust and debris. Preferably, use interconnecting wooden ceiling tiles covered by shock-absorbing foam and finally covered with a HDPE or PE plastic foil; the foil should be flat and smooth, and should not bear any patterning or creases. Do not walk on the foil while wearing shoes, so as to keep the foil clean.

Place the modules on the floor in the orientation as shown in the installation drawings, specifically paying attention to the location of the module power connectors.

Write down the serial number of the modules on a document available from the project leader to trace the final location of the module in the store for traceability reasons.

Connect the modules according to the following steps.

- Fold back the panel backcover. Remove the purple single crossbar clips from the Left or Right module, see Figure 5 below (here the back cover is not shown for the purpose of clarity).
- Remove the purple single crossbar clips from the Centre module, Figure 6.
- Insert the coupling plates and secure each coupling plate using the supplied M6x10mm bolts. Do not use force while inserting the plates, Figure 7.
- Connect both modules together using the coupling plates and fix using the supplied M6x10mm bolts. Ensure that the modules are connected flat and level at the base, see red line, Figure 8.
- Place the outer (indicated) double crossbar clips at the original positions of the single crossbar clips (the center clips will be placed in step 3.11), Figure 9.

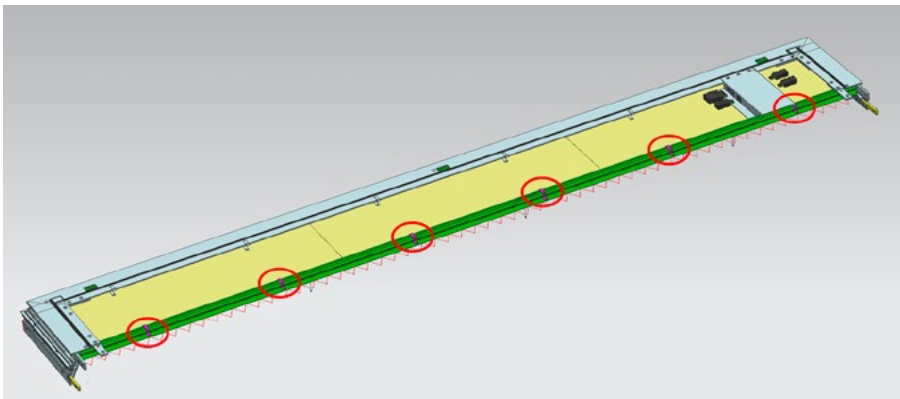


Figure 5: Remove the single crossbar clips from the Left and Right modules.

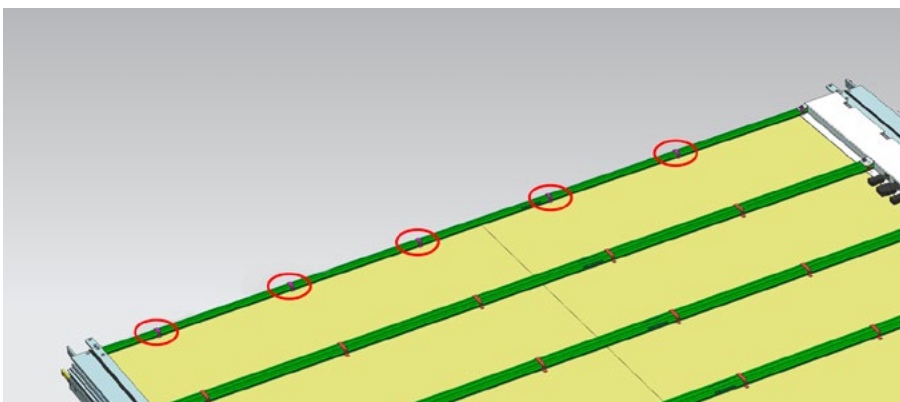


Figure 6: Remove the purple single crossbar clips from the Centre module.

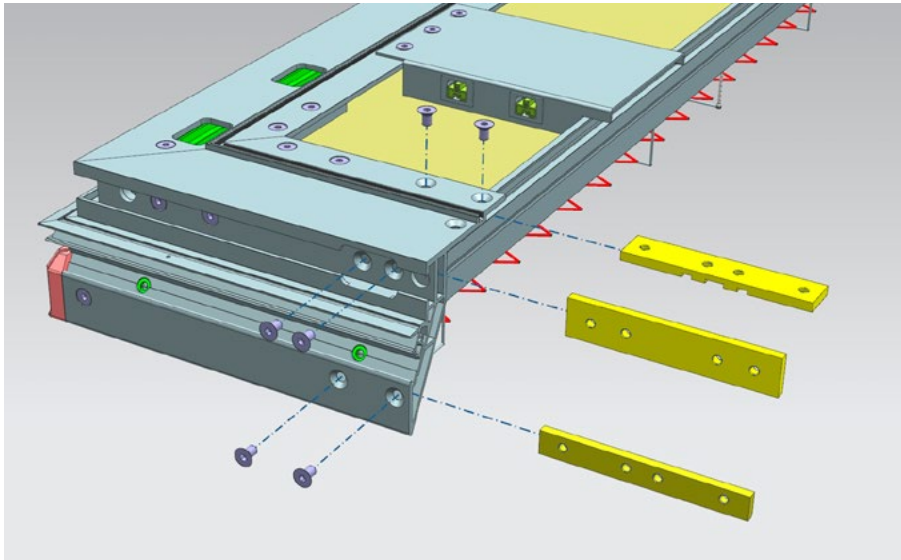


Figure 7: Insert the coupling plates and secure each coupling plate using the supplied M6x10mm bolts.

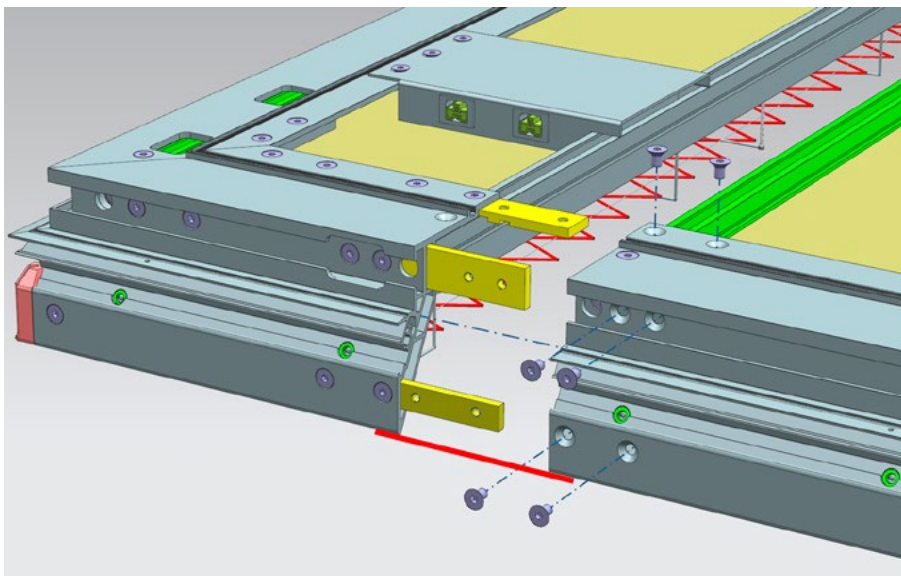


Figure 8: Connect both modules together using the coupling plates.

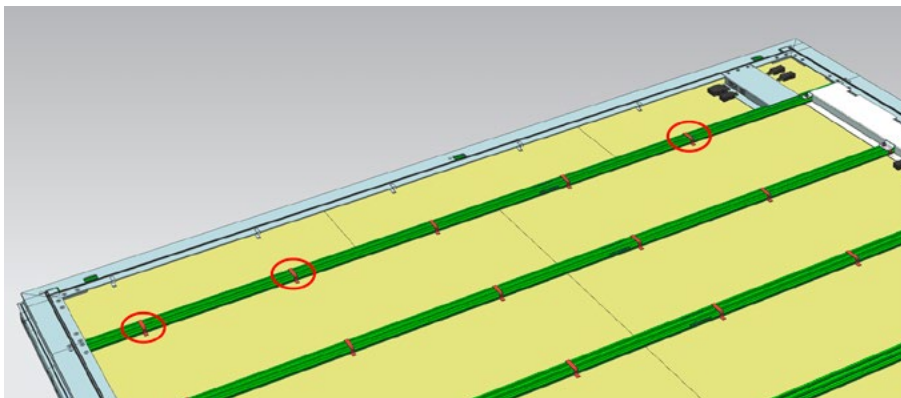


Figure 9: Place the outer double crossbar clips.

3.8 Connect the lower mounting blocks to the panel

1. The lower mounting blocks are to be secured using the supplied T-nuts. Insert the T-nuts into the sockets in the Left and Right module, and shift them to their correct positions. Into each mounting block installed on the ceiling, insert two T-nuts, see Figure 10. The intended positions are indicated on installation drawings. Using the tape measure and marker pen, indicate the positions of the mounting blocks on the panel according to the installation drawings.

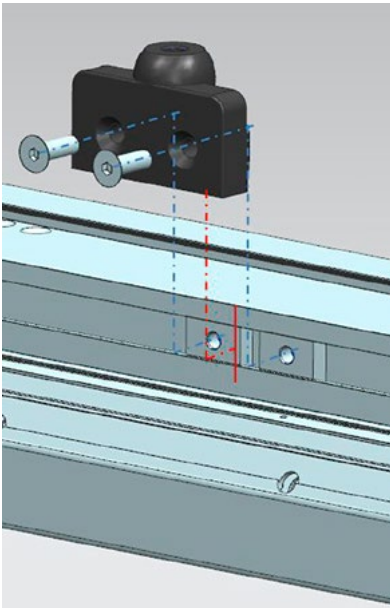


Figure 10: Connecting the mounting blocks to the panel.

2. Attach the mounting blocks onto the panel at the marked positions.

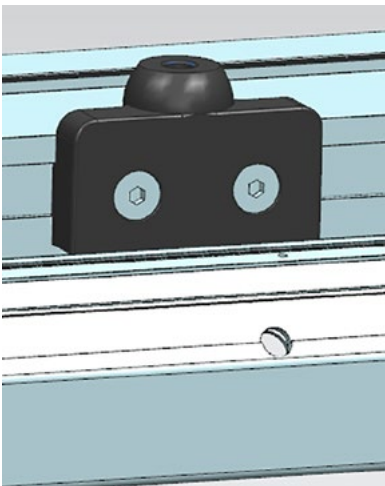


Figure 11: Lower mounting block on panel.



Tighten the screws with a defined torque of $12 \pm 1\text{Nm}$.

3. Mount a Reutlinger connector (Figure 2, page 8) in each lower mounting block, see Figure 12.

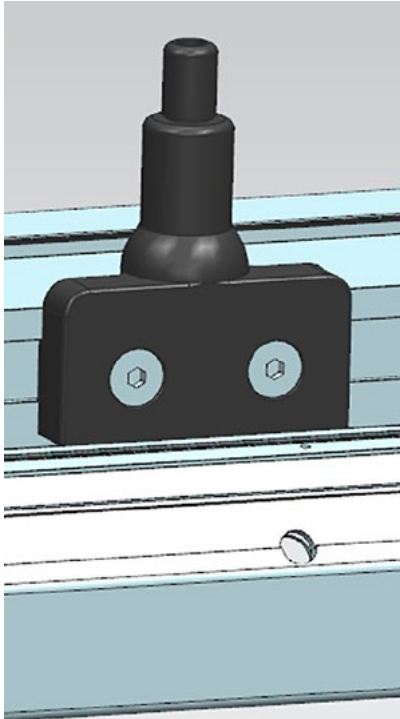


Figure 12: Reutlinger connector in lower mounting block.

3.9 Connect the temporary hoisting blocks to the panel

Temporary hoisting blocks are to be attached to the panel and secured using the eye bolt and shackle pin. The shackle pin must be hand tightened. The intended positions are indicated on installation drawings. Using the tape measure and marker pen, indicate the positions of the hoisting blocks on the panel according to the installation drawings.

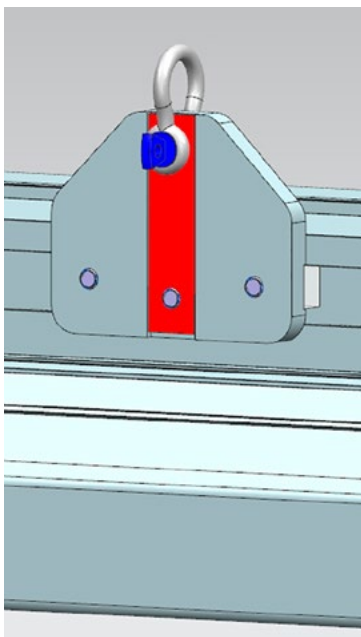


Figure 13: Temporary hoisting block.



THE SHACKLE PIN MUST BE HAND TIGHTENED.

3.10 Connect the hoisting winches to the hoisting points in the substructure and hoisting cable to the temporary hoisting blocks

3.11 Hoist the panel and rotate to a 60 degree position

Connect the safety sling to the eyebolts in the hoisting system as shown in Figure 14 and Figure 15.



WARNING!

THE SHACKLE PIN MUST BE HAND TIGHTENED.

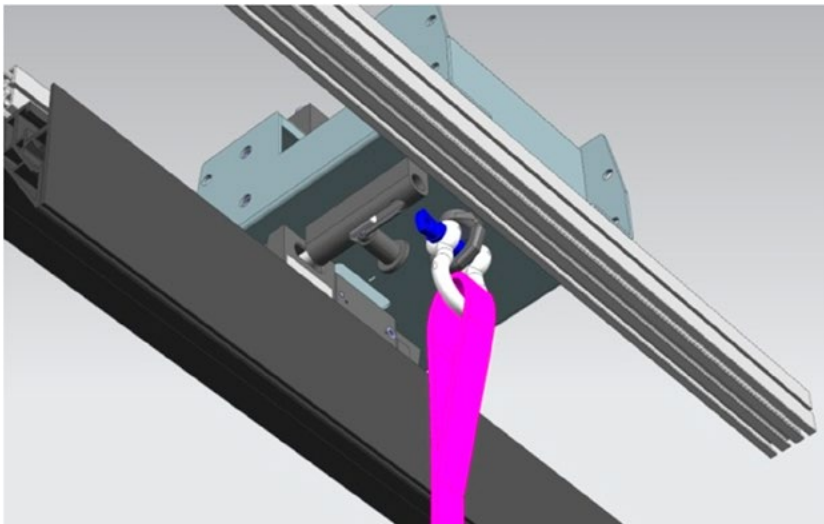


Figure 14: Attaching the safety sling to the hoisting system.

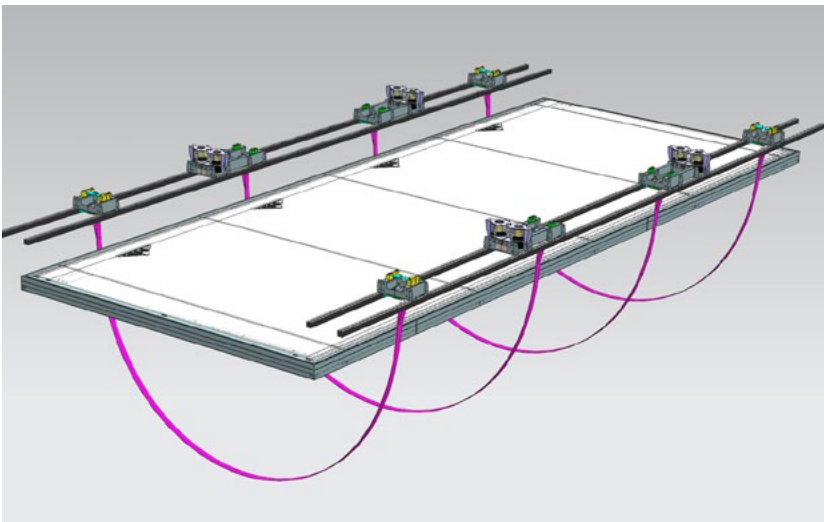


Figure 15: Safety slings are connected across the panel.

Lower the panel to approx. 60cm above floor level in a 60 degree position, and place the two centre double crossbar clips at the original positions of the single crossbar clips as indicated in Figure 16.

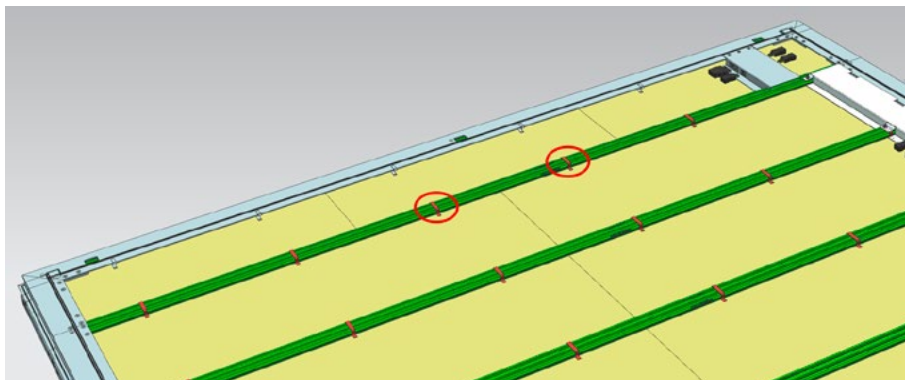


Figure 16: Position of the two centre double crossbar clips (at the original positions of the single crossbar clips).

Connect each back cover to the next as shown (blue colored strip indicates the integrated velcro) as indicated in Figure 17.

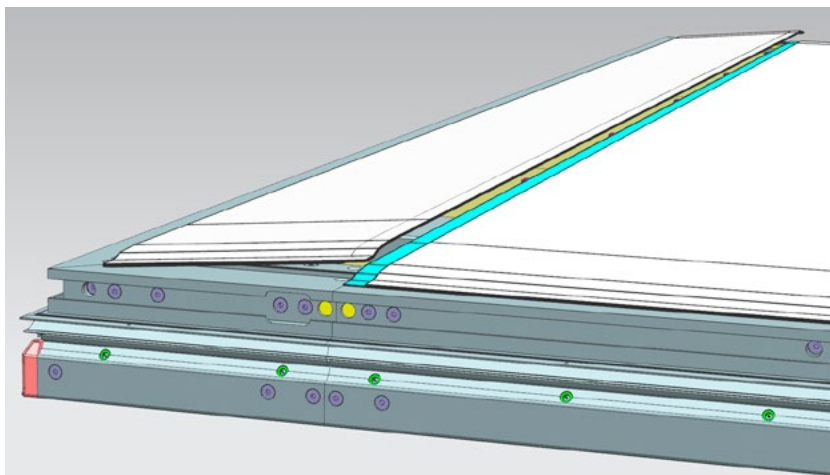


Figure 17: Connect each backcover to the next.

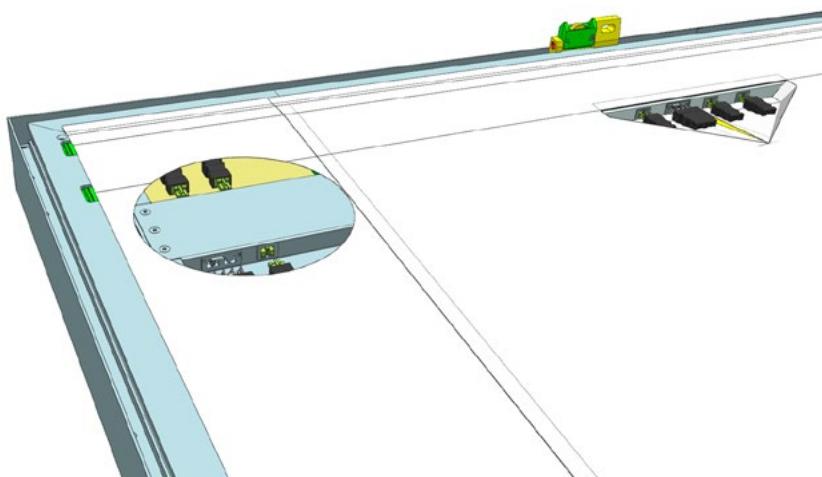


Figure 18: The connector brackets are hidden behind the back cover.

3.12 Connect the luminous ceiling panel power using extension cables

Attach the luminous ceiling panel extension cables to the luminous ceiling panel power cables that are installed on the ceiling.



WARNING!

CHECK MAIN SWITCH ON E-CABINET TO ENSURE THAT THE MAIN POWER SUPPLY IS SWITCHED OFF BEFORE INSTALLING OR WIRING A LUMINOUS CEILING PANEL.

3.13 Test lighting up of the panel

Switch on the relevant E-cabinet (E-cabinet's main switch) and check that the luminous ceiling panel lights up fully and homogeneously.



WARNING!

CHECK THAT NO WORK IS UNDERTAKEN ON PANELS CONNECTED TO THE SAME E-CABINET.



WARNING!

DO NOT TOUCH ELECTRONIC PARTS OF THE LUMINOUS CEILING PANEL WITHOUT AN ESD CONNECTION.

3.14 Hoist the panel up to a sufficient height, and attach the safety sling

Consult Chapter 4 for instructions on safe operation of the luminous ceiling panel hoisting system. Ensure that you understand and follow the instructions.



Failure to do so may result in damage to the product and/or personal injury.

Disconnect one side of the safety sling.

Hoist the panel up to a height of about two meters by operating the winches in a synchronized way, according to the procedure described in Chapter 4.

Ensure that the luminous ceiling panel extensions cables are not caught between ceiling structures and the luminous ceiling panel. Re-connect the free side of the safety safety sling to the hoisting system.

3.15 Use a white glove to clean the edge of the frame

Clean the floor space and prepare the fabric upholstery by first putting down foam and protective plastic foil.

Caution:

- The surface onto which fabrics are to be laid needs to be completely smooth, clean and flat in order to prevent damage and soiling of the fiberglass fabrics.

Caution:

- Do not walk on the plastic foil.

To ensure that the fabric does not get dirty, clean the frame edge using a white glove.

3.16 Roll out fabrics underneath the panel

Check all boxes and/or crates for damage before unpacking fabric. In the event that boxes are damaged, please inform the local project leader.

Check Factory Acceptance Test form of the fabric and corresponding number for each panel.

Fabric upholstery may only be performed by a specially trained partner approved by Philips.

3.17 Lower the panel onto the fabrics

Consult Chapter 4 for instructions on safe operation of the luminous ceiling panel hoisting system. Ensure that you understand and follow the instructions.



Failure to do so may result in damage to the product and/or personal injury.

Disconnect one side of the safety sling, and move it out of the working area.

Caution:

- Prevent sideways movement of the panel when it is in close proximity to the fabrics. Failure to do so can cause fabric damage.

3.18 Attach the fabrics to the panel and tension them

Fabric upholstery may only be performed by a specially trained partner approved by Philips.

3.19 Hoist the panel up to test height of two meters

Consult Chapter 4 for instructions on safe operation of the luminous ceiling panel hoisting system. Ensure that you understand and follow the instructions.



Failure to do so may result in damage to the product and/or personal injury.

3.20 Test fabric quality by switching the luminous ceiling panel on

Activate the relevant E-cabinet and verify that fabrics look smooth and free of damage or dirt.



WARNING!

NOBODY IS TO BE UNDERNEATH A LUMINOUS CEILING PANEL WHEN THE PANEL IS NOT SECURED WITH SAFETY SLINGS.

3.21 Attach the luminous ceiling panel side covers

Lower the panel to a working height of approximately 1m. Consult Chapter 4 for instructions on safe operation of the luminous ceiling panel hoisting system. Ensure that you understand and follow the instructions.



Failure to do so may result in damage to the product and/or personal injury.

The side covers are protected by an anti-scratch foil. Ensure that the foil is not damaged and that it has not been removed while installing the side covers on the luminous ceiling panel. The protective foils are to be removed only after project completion.

Attach the luminous ceiling panel side covers, according to the instruction drawings below.

- Start by placing the pieces labeled (1) on the short sides of the luminous ceiling panel, see Figure 19.
- Then place pieces (2) such that their ends meet the end of piece (1), without leaving any gap, see Figure 20 and Figure 21.
- Fine tune the position of (1) if necessary.
- Do the same with piece (3) at the other end, see Figure 22, and again without leaving any gap, see Figure 23.
- Finish by placing multiple pieces (4) along the remaining part of the luminous ceiling panel, see Figure 24. Use a nominal gap of 1mm between the side covers, see Figure 25.

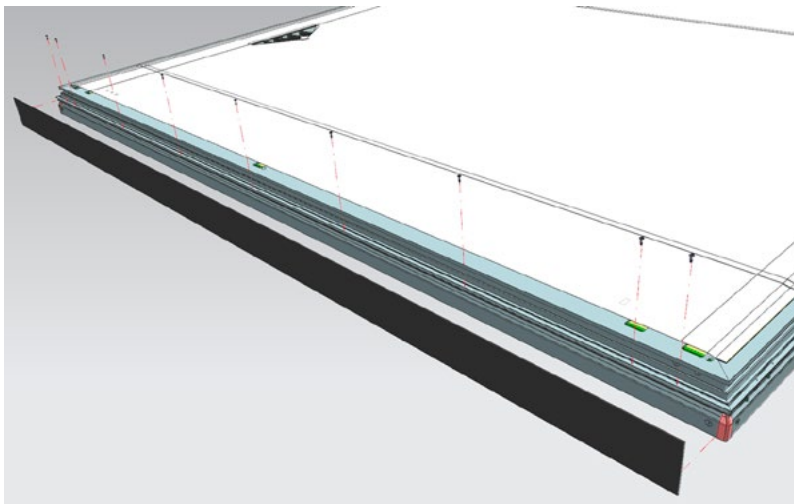


Figure 19: Place pieces labelled 1.

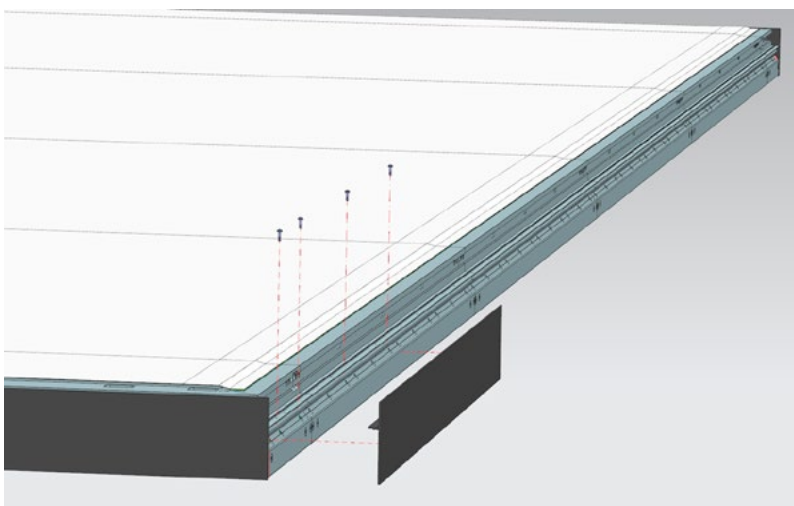


Figure 20: Place pieces labelled 2.

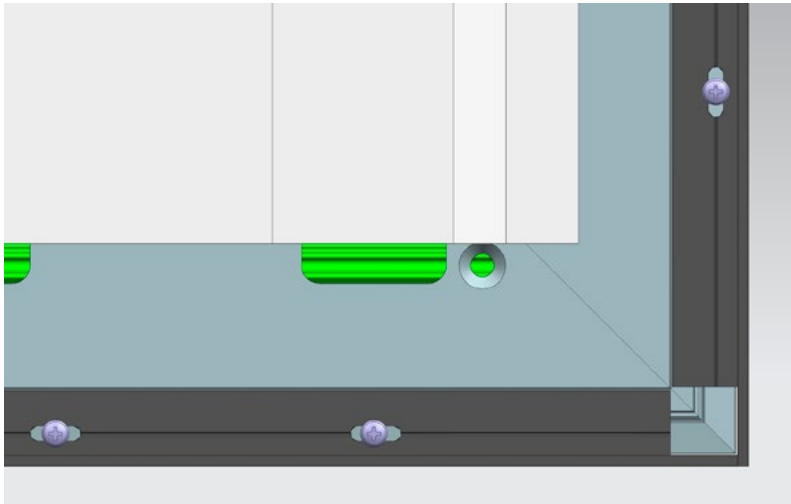


Figure 21: Alignment of pieces labelled 1 and 2.

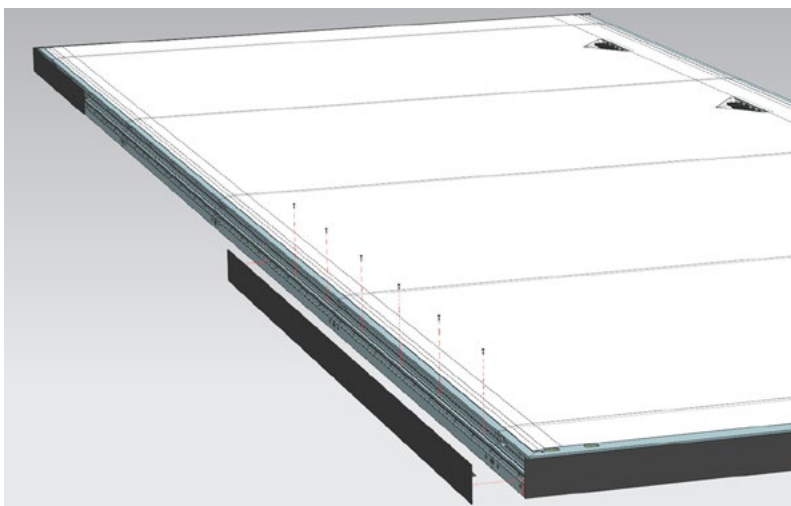


Figure 22: Place piece labelled 3.

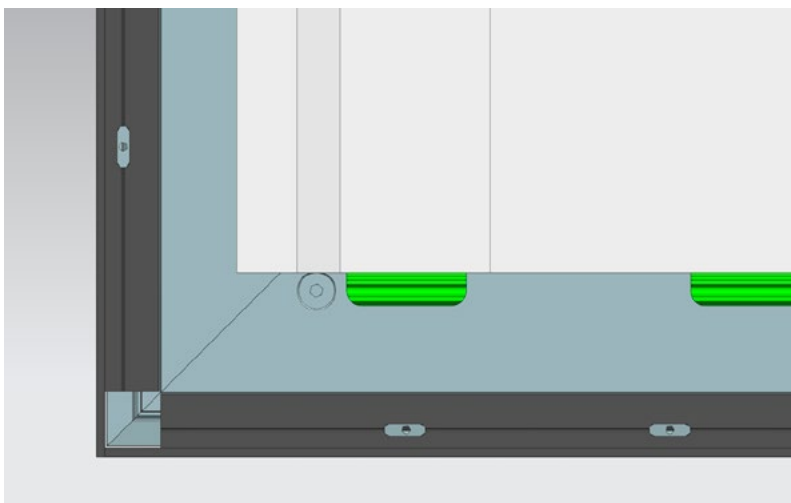


Figure 23: Alignment of pieces labelled 2 and 3.

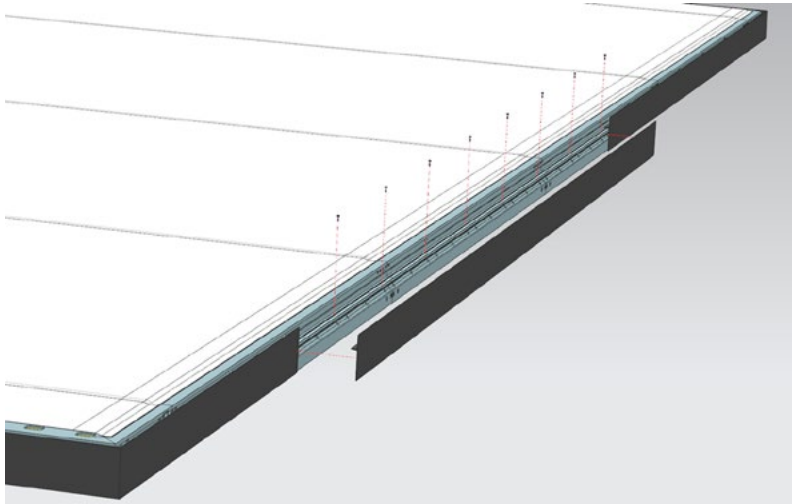


Figure 24: Place piece labelled 4.



Figure 25: Align pieces with a maximum gap of 1mm.

3.22 Attach fabric protection foil

Attach the fabric protection foil by taping the ends onto the anti-scratch foil of the side covers. Note: the protection foil is static and may adhere to the fabric; this is normal.

Do not remove the fabric protection foil until the project has been completed.

3.23 Hoist the panel up to about 1m below ceiling level

Consult Chapter 4 for instructions on safe operation of the luminous ceiling panel hoisting system. Ensure that you understand and follow the instructions.



Failure to do so may result in damage to the product and/or personal injury.

Hoist the luminous ceiling panel up to a height about 1m below its final position.

3.24 Attach the luminous ceiling panel power cables to each module

Disconnect and remove the extension cables from the luminous ceiling panel. Connect the cables attached to the junction boxes on the ceiling, directly to the luminous ceiling panel.

3.25 Test lighting up of the luminous ceiling panel

Switch on the relevant E-cabinet(s) and verify that the luminous ceiling panel lights up fully and homogeneously.

3.26 Hoist the panel up to the ceiling and mount it into place using the steel cables

Consult Chapter 4 for instructions on safe operation of the luminous ceiling panel hoisting system. Ensure that you understand and follow the instructions.



Failure to do so may result in damage to the product and/or personal injury.

Attach the steel cables to the Reutlinger units at the panel and hand tighten the Reutlinger lock.

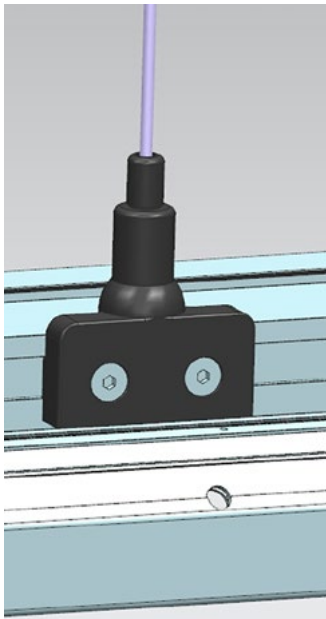


Figure 26: Steel cable in Reutlinger connector.



THE REUTLINGER LOCK MUST BE HAND TIGHTENED.

4. Using the luminous ceiling panel hoisting system

4.1 User instructions for the hoisting system

The number of winches and operators in a hoisting system depends on the size of the panel. Because each winch is manually operated, one operator per winch is needed to lower and lift a luminous ceiling panel, unless a synchronization tool is used on the winches.



The hoisting system may only be operated by personnel who have been trained in the procedures laid out in this chapter. Failure to do so may result in damage to the product and/or personal injury.



WARNING!

NOBODY IS TO BE UNDERNEATH THE PANEL UNLESS:

- **THE PANEL IS MOUNTED IN ITS FINAL POSITION TO THE CEILING OR**
- **ALL HOISTING ROPES/LINES ON BOTH SIDES ARE UNDER TENSION – I.E. THE PANEL IS HORIZONTAL – AND THE SAFETY SLINGS ARE CONNECTED.**



Do not exceed a difference in height between hoisting points of:

- **$\pm 2.5\text{cm}$ for all points on one side of the panel.**
- **$\pm 1\text{m}$ for hoisting points on opposite sides of the panel.**

Follow the instructions given in this manual to ensure correct synchronization during hoisting.

4.2 Connecting the winches to the hoisting points in the substructure and hoisting cables to the temporary hoisting blocks

4.3 Connecting the safety slings

In order to ensure safety of personnel working underneath the luminous ceiling panel during hoisting operation, it is necessary to use the supplied safety slings.

To attach the safety sling, connect the shackle to the eye bolt, see Figure 27. Ensure that the shackle pin is properly screwed (hand tight). Connect one safety sling only at each eye bolt.



Always ensure that each eye bolt has only one safety sling connected.



WARNING!

THE SHACKLE PIN NEEDS TO BE HAND TIGHTENED.

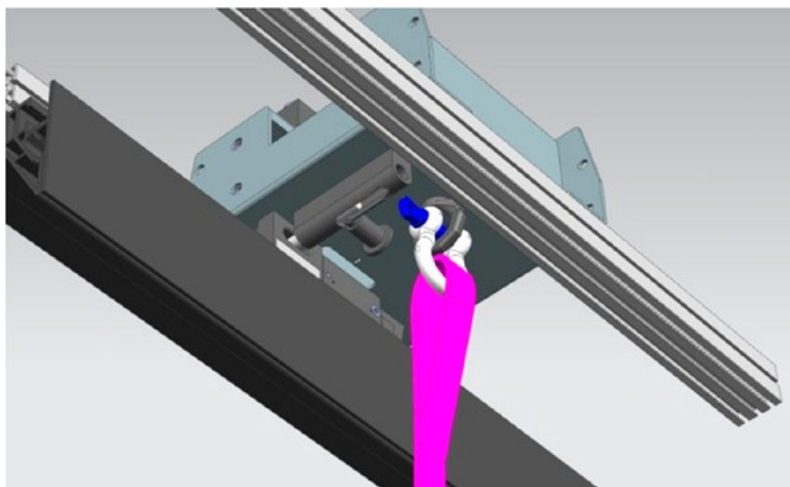


Figure 27: Attaching the safety sling to the hoisting system. Always ensure that the safety sling shackle is properly secured before starting hoisting.

To remove the safety sling, unscrew the shackle pin.

4.4 Lifting and lowering the panel in a synchronized way

The luminous ceiling panel can be lowered and lifted by using the winches simultaneously.

Operate the winches in a synchronized way to stay within the maximum height differences between hoisting points mentioned in chapter 4.1:

- Attach the supplied synchronization tool (see Figure 28) to the luminous ceiling panel at each hoisting point, in such a way that the scales are readable by the winch operators. This is done by placing the hook over the luminous ceiling panel side cover in the correct orientation or by using the supplied connection bracket; do this as close as practicable to the point where the rope extends up to the ceiling from the flip flop block.



Figure 28: Synchronization tool.

- Place the other end of the tool on the floor.
- Appoint one supervisor, to be responsible for calling out target heights (to be read off from the synchronization tool).
- The supervisor should call out at intervals of 10cm.
- The hoisting crew should strive to hoist as equally as possible within each step.
- The supervisor should ensure that crew members stop after completing each step, such that the height can be checked on each synchronization tool.
- Simultaneously hoist both sides of the luminous ceiling panel in this way, or, in cases where this is not practical, hoist one side up (down) to a height of maximum 1m above (below) the height of the other side. Thereafter, hoist the other side up (down) to a height of maximum 1m above (below) the height of the first side.
- In this stepwise fashion, lift or lower the panel from floor to ceiling or vice versa, see Figure 29.

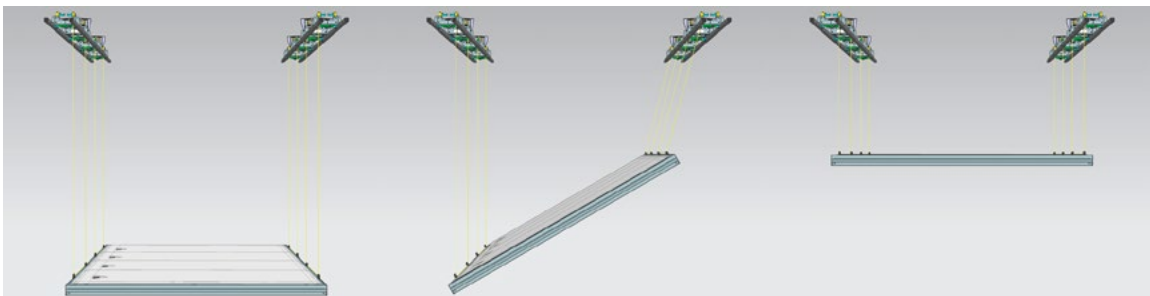


Figure 29: Stepwise hoisting or lowering the panel.

When you start hoisting from a situation in which one end of the luminous ceiling panel is more than 1m below the other end (this ceiling panel orientation could be desirable during installation or service situations), it should first be lifted to a horizontal position (or a height of 1m above the height of the other side) by operating the winches at the lowest side of the panel only.



Never hoist up the high side of a luminous ceiling panel when the higher side is more than 1m above the lower side.

4.5 Lowering the panel down from ceiling level

4.5.1 Connecting the synchronization tool

Attach the supplied synchronization tool to the luminous ceiling panel at each hoisting point, in such a way that the scales are readable by the winch operators. This is done by placing the hook over the luminous ceiling panel side cover in the correct orientation; do this as close as practicable to the point where the rope extends up to the ceiling from the flip flop block, see Figure 26.

4.5.2 Un-mount the luminous ceiling panel

In order to be able to un-mount the luminous ceiling panel, it may be necessary to hoist the luminous ceiling panel up by a few centimeters, such that the steel wires do not carry the weight anymore. Do not over tighten the ropes by pulling the luminous ceiling panel up too much. The lock of the Reutlinger connectors can now be released to unlock the panel.

5. Terminology

Philips OneSpace luminous ceiling panel

Philips OneSpace luminous ceiling is a functional white light solution that is mounted to the ceiling and is the part of a total system that generates light.

E-cabinets

The E-cabinet (electrical cabinet) is the part of total system that contains the drivers, switches and control components to drive a luminous ceiling panel.

Hoisting system

The hoisting system (winches) is used to hoist the panel from floor level into final position, and to lower the panel for maintenance purposes.

Junction box

A junction box is an electrical unit, mounted to the ceiling, and used to make the connection between the field cables and the luminous ceiling panel power cables.

Field cables

Field cables are the power cables between the E-cabinet and the junction box.

T-nut

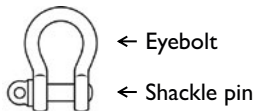
A T-nut is a nut shaped like a 'T', and is used for an easy install of the nut in the luminous ceiling panel frame.

Safety sling

A safety sling offers the possibility to safely walk below the panel when the luminous ceiling panel is not locked into position and only hanging from the hoisting ropes.

Eyebolt and shackle pin

A safety sling is connected to the hoisting system using an eyebolt and shackle pin.



← Eyebolt

← Shackle pin

6. Document information

Info	Content
Title	Philips OneSpace luminous ceiling panel installation manual
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